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(21) International Application Number: PCT/IB99/02020 (22) International Filing Date: 16 December 1999 (16.12.99) (30) Priority Data: 09/217,694 21 December 1998 (21.12.98) US (63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US 09/217,694 (CIP) Filed on 21 December 1998 (21.12.98) (71) Applicant (for all designated States except US): THE GENET- ICS COMPANY, INC. [CH/CH]; Universität Zürich, Win- terthurerstrasse 190, CH-8057 Zurich (CH). (72) Inventor; and (75) Inventor/Applicant (for US only): HAFEN, Ernst [CH/CH]; Hochstrasse 95, CH-8044 Zürich (CH). (74) Agent: SCHLICH, George, William; Mathys & Squire, 100 Gray's Inn Road, London WC1X 8AL (GB).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: FUNCTION-BASED SMALL MOLECULAR WEIGHT COMPOUND SCREENING SYSTEM IN <i>DROSOPHILA</i> <i>MELANOGASTER</i>		
(57) Abstract <p>A methodology for screening libraries of compounds for desirable biological/therapeutic activities in a system that may be automated for the microinjection of compound(s) of interest into the open circulatory system (i.e., hemolymph) of <i>Drosophila</i> larvae genetically modified to sensitize a particular biochemical pathway, such as those related to a human disease, either by expression of a human disease gene or by the activation of a <i>Drosophila</i> gene that in the adult fly results in the development of an easily detectable phenotypes such that compounds that selectively interfere with this specific biochemical pathway will modify or suppress the phenotype and can be identified rapidly and efficiently.</p>		